

REPORT ON MACHINERY.

No. 34610

Received at London Office THU 4 APR 1918

of writing Report 20/3/18 When handed in at Local Office Glasgow 19 Glasgow Port of Glasgow

in Survey held at Glasgow Date, First Survey 25 June 1914 Last Survey 23 Mar 1918

g. Book. on the Machinery of S.S. CROXTETH (Number of Plates 38)

Master James Built at Paisley By whom built J. Fullerton & Co (18244) Tons { Gross 1918 Net 1918 When built 1918

Engines made at Glasgow By whom made Ross & Duncan (181009) when made 1918

Boilers made at Glasgow By whom made D. (181508) when made 1918

Registered Horse Power 122 Owners Alfred Horsland & Co Port belonging to Liverpool

Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 15. 25 1/2. 41 Length of Stroke 30 Revs. per minute 100 Dia. of Screw shaft 8 1/2 as per rule 8 1/2 as fitted 8 1/2 Material of screw shaft W.P.O.T. / Pan

Is the after end of the liner made water tight Yes If the liner is in more than one length are the joints burned no If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 36

Dia. of Tunnel shaft 8 1/2 as per rule 8 1/2 as fitted 8 1/2 Dia. of Crank shaft journals 8 1/2 as per rule 8 1/2 as fitted 8 1/2 Dia. of Crank pin 8 1/2 Size of Crank webs 15 1/2 x 8 Dia. of thrust shaft under collar 8 1/2 Dia. of screw 10-6 Pitch of Screw 12-0 No. of Blades 4 State whether moveable no Total surface 44 1/2

To. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 11 Can one be overhauled while the other is at work Yes

To. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 11 Can one be overhauled while the other is at work Yes

To. of Donkey Engines 2 Sizes of Pumps Donkey 6 x 8 x 9 No. and size of connections connected to both Bilge and Donkey pumps Donkey 3 x 2 x 3

Engine Room 3-2 1/2 In Holds, &c. One each side 2

To. of Bilge Injections 3 sizes 3 Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size 1-2 1/2

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible no

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Turn cock

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line Above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

That pipes are carried through the bunkers Forward & Aft How are they protected Bored in

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Dates of examination of completion of fitting of Sea Connections 5-11-17 of Stern Tube 5-11-17 Screw shaft and Propeller 5-11-17

Is the Screw Shaft Tunnel watertight no Is it fitted with a watertight door no worked from no

BOILERS, &c.—(Letter for record no) Manufacturers of Steel Steel Company of Scotland Ld

Total Heating Surface of Boilers 2876 Is Forced Draft fitted no No. and Description of Boilers One single ended

Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 29-1-18 No. of Certificate 14069

Can each boiler be worked separately Yes Area of fire grate in each boiler 59 1/2 No. and Description of Safety Valves to each boiler 2 Direct Spring Area of each valve 5.940 Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 3-6 dia. of boilers 15-0 Length 10-6 Material of shell plates Steel

Thickness 1 1/2 Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams LAP 2R

Long. seams 204 TR Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 18 1/2

Percentage of strength of longitudinal joint 85.2 Working pressure of shell by rules 182 lb Size of manhole in shell 16 x 12

Use of compensating ring 7 x 1 1/2 No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 46 1/2

Length of plain part 5-6 1/2 Thickness of plates 1 1/2 Description of longitudinal joint Weld No. of strengthening rings none

Working pressure of furnace by the rules 183 lb Combustion chamber plates: Material Steel Thickness: Sides 1 1/2 Back 1 1/2 Top 1 1/2 Bottom 1 1/2

Thickness of stays to ditto: Sides 10 x 8 1/2 Back 8 1/2 x 9 1/2 Top 10 x 8 1/2 If stays are fitted with nuts or riveted heads no Working pressure by rules 183

Material of stays Steel Diameter at smallest part 2.070 Area supported by each stay 1000 Working pressure by rules 186 End plates in steam space: Material Steel Thickness 1 1/2 Pitch of stays 14 1/2 x 7 1/2 How are stays secured by nuts Working pressure by rules 180 Material of stays Steel

Diameter at smallest part 6.20 Area supported by each stay 350 Working pressure by rules 184 Material of Front plates at bottom Steel

Thickness 2 1/2 Material of Lower back plate Steel Thickness 2 1/2 Greatest pitch of stays 14 x 8 1/2 Working pressure of plate by rules 183

Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 2 1/2 Back 1 1/2 Mean pitch of stays 11-3

Pitch across wide water spaces 14 Working pressures by rules 185 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/2 x 1 1/2 Length as per rule 33-56 Distance apart 8 1/2 Number and pitch of stays in each 2-10

Working pressure by rules 186 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately no

Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivets no

Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no

Stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no

Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

SPARE GEAR. State the articles supplied :-

2 each of top & bottom end main bearing bolts and a set of coupling bolts all with nuts, lead & bilge pump valves, assorted bolts & nuts, iron of various sizes.

The foregoing is a correct description,

Ross & Duncan, Glasgow

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1914 June 25 Aug 3 13, Sep 3, 11, 26, Oct 10, 18, 23, 30, 31, Nov 5, 12, 15, 20, 26, Dec 14, 16, 19, 24, 27, 1918 Jan 1, 8, 15, 22, 29, Feb 5, 12, 14, 15, 20, 25, Mar 4, 12, 16, 20, 23.
During erection on board vessel - - - }
Total No. of visits 38

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts - Cylinders 17-12-17 Slides 17-12-17 Covers 5-2-18 Pistons 5-2-18 Rods 20-11-17 Connecting rods 28-1-18 Crank shaft 27-12-17 Thrust shaft 18-10-17 Tunnel shafts NONE Screw shaft 26-9-17 Propeller 26-9-17 Stern tube 23-10-17 Steam pipes tested 16-3-18 Engine and boiler seatings 5-11-17 Engines holding down bolts 20-3-18 Completion of pumping arrangements 20-3-18 Boilers fixed 20-3-18 Engines tried under steam 23-3-18 Main boiler safety valves adjusted 20-3-18 Thickness of adjusting washers 1/4" Port 3/16"

Material of Crank shaft W. IRON Identification Mark on Do. 90R. Material of Thrust shaft W. IRON Identification Mark on Do. 90R

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts W. IRON Identification Marks on Do. 90R

Material of Steam Pipes Solid drawn Copper Test pressure 360 lbs.

Is an installation fitted for burning oil fuel

Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case Yes. If so, state name of vessel

Aigburth

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built under special survey; the materials & workmanship are good. It has been properly fitted on board & tried under steam & the case is eligible in my opinion for the notation +LMC 3-18.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3-18

The amount of Entry Fee ... £ 2 - 0 - 0 When applied for, Special ... £ 18 - 6 - 0 23-3-18 Donkey Boiler Fee ... £ Travelling Expenses (if any) £ 25-3-18

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute GLASGOW 3 APR 1918

Assigned + LMC 3-18

MACHINERY CERTIFICATE 4/4/18 WRITTEN



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